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An Analysis of Young People's Perspectives on Technological Entrepreneurship Prospects

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Abstract: Technopreneurial prospects, which concentrate on developing high-value, tech-driven firms, are found at the nexus of technical innovation and entrepreneurship. Artificial intelligence (AI), cybersecurity, fintech, health tech, edtech, and smart city technology are important fields. Developing scalable solutions that use blockchain, IoT, AI, and biotechnology to address challenging issues presents opportunities. This study's primary goal is to assess how young people view different technopreneurial options. The impact of youth demographic characteristics on their perspective and awareness of various technopreneurial options is the primary focus of this study. For this investigation, the snowball sampling technique is employed. For this investigation, regression, Anova, and correlation tests are employed. This article analyzed that youth level of knowledge is statistically significant with their interest to take entrepreneurship as their career.

Keywords: Artificial Intelligence (AI), Blockchain, Biotechnology, Cybersecurity, Technological Entrepreneurship.

1 INTRODUCTION

Technological entrepreneurship has emerged as a significant driver of innovation, economic development, and employment generation in the modern digital economy. Youth participation in entrepreneurship is increasingly recognized as an important factor in promoting social transformation, innovation, and sustainable economic growth [1]. The rapid advancement of autonomous and digital technologies has also transformed consumer behavior and business operations, creating new opportunities and challenges for technology-oriented entrepreneurial ventures [2]. Technopreneurship, which integrates technological innovation with entrepreneurial activities, has gained considerable attention in startup ecosystems due to its ability to support scalable and innovation-driven business models [3].

The growing collaboration among industries, educational institutions, and governance systems further strengthens entrepreneurial ecosystems and encourages youth involvement in entrepreneurship activities [4]. In addition, digital technologies such as artificial intelligence, cloud computing, big data, and digital platforms have become essential components of entrepreneurial development and national innovation systems [5]. Entrepreneurship opportunities are not limited to urban environments alone, as technological advancement and adaptive systems are also influencing rural entrepreneurship and regional economic development [6].

Artificial intelligence and technological innovation are increasingly contributing to global entrepreneurial activities by improving efficiency, decision-making, and business competitiveness [7]. Furthermore, entrepreneurial intention and behavior are strongly associated with digital entrepreneurship perspectives, where technological awareness and perceived opportunities influence career-related decisions among youth [8]. The increasing emphasis on sustainability and green startups has also expanded the scope of entrepreneurship by encouraging environmentally responsible and innovation-oriented business practices [9]. Family entrepreneurial backgrounds and financial ecosystems further influence entrepreneurial aspirations and participation across different societies [10].

Moreover, emerging financing mechanisms such as crowdfunding have provided additional support for entrepreneurial ventures, particularly in technology-driven industries [11]. Despite the growing opportunities in technopreneurship, young entrepreneurs often face challenges related to technological pressure, uncertainty, and adaptation to rapidly evolving digital environments [12]. Therefore, understanding young people's perspectives, awareness levels, and interest toward technological entrepreneurship is essential for developing effective educational strategies, entrepreneurial policies, and innovation ecosystems.

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This study focuses on analyzing youth perceptions regarding technopreneurial opportunities and examining the relationship between awareness and entrepreneurial career interest.

2 LITERATURE REVIEW

P. Alzate et al. [1] emphasized that youth entrepreneurship plays a significant role in economic transformation and innovation. Their study highlighted that young entrepreneurs contribute to social development by integrating innovation with societal needs and adopting emerging technological trends. S. Sohn [2] examined consumer perceived risks associated with autonomous retail technologies and observed that technological adoption is influenced by trust, risk perception, and acceptance of digital systems. The study indicated that technological confidence is important for encouraging entrepreneurial innovation in technology-based businesses.

Kushwaha and Jose [3] investigated technopreneurship in startups and identified that entrepreneurial mindset, technological orientation, and innovation capabilities are major determinants of successful technopreneurial ventures. Their findings revealed that digital skills and opportunity recognition are crucial for startup development. Sharma, Masih, and Mishra [4] analyzed youth entrepreneurship from an industry and governance perspective and concluded that institutional support, mentorship, and policy frameworks positively influence entrepreneurial participation among young individuals. The study highlighted the importance of collaborative ecosystems in strengthening entrepreneurial activities.

Von Briel et al. [5] discussed the role of digital technologies in national entrepreneurship ecosystems and stated that technologies such as artificial intelligence, cloud computing, and digital platforms significantly enhance entrepreneurial opportunities and innovation capacity across industries. G. Xiang and C. Hu [6] reviewed rural entrepreneurship from the perspective of complex adaptive systems theory and observed that entrepreneurship development depends on adaptive technological systems, innovation networks, and environmental support mechanisms. The study emphasized the growing importance of technology-driven rural entrepreneurship.

Y. Tian, X. Wang, N. Chen, and Z. Zhang [7] examined the impact of artificial intelligence technological innovation on global entrepreneurial activities and found that AI-driven innovations improve business efficiency, market competitiveness, and entrepreneurial growth opportunities in various sectors. Y. H. S. Al-Mamary and M. M. Alraja [8] studied entrepreneurship intention and behavior from the digital entrepreneurship perspective using the Theory of Planned Behavior (TPB). Their findings showed that attitudes, perceived behavioral control, and technological awareness significantly influence entrepreneurial intention among youth.

S. N. Sharma and R. Subba [9] analyzed the relationship between entrepreneurship and sustainability through green startups. Their research indicated that sustainable entrepreneurial practices positively contribute to economic development while promoting environmental responsibility and innovation. V. Fernandez [10] explored family entrepreneurship across different countries and identified that family entrepreneurial backgrounds significantly influence entrepreneurial motivation, business continuity, and entrepreneurial decision-making processes.

H. Baber, B. B. Kaluvilla, and H. Ramkissoon [11] studied crowdfunding and entrepreneurship in tourism and hospitality sectors and concluded that alternative funding mechanisms support startup growth and reduce financial barriers for entrepreneurs. The study emphasized the need for technological preparedness and adaptive capabilities among young entrepreneurs.

3 METHODOLOGY

This study adopts a descriptive research design to examine youth perception towards technopreneurship opportunities. Given the lack of a youth who have the knowledge on technopreneurial opportunities, the study targets an undetermined population, focusing specifically on active youngsters. To address the challenges of an inaccessible sampling frame, a non-probability convenience sampling technique was employed. This approach allowed for efficient data procurement while ensuring the participants met the necessary criteria of practical engagement with fintech interfaces A total sample size of N=100 was established, with data synthesized from both primary and secondary sources:

- **Primary Data:** First-hand empirical evidence was gathered through structured instruments designed to elicit specific responses aligned with the research objectives. This ensured the data remained current, pertinent, and directly applicable to the identified variables.

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- **Secondary Data:** To provide contextual depth and theoretical grounding, a comprehensive review of extant literature was conducted. This included the synthesis of scholarly journals, industry reports, and published academic monographs, facilitating a robust triangulation of the primary findings.

This dual-layered data collection strategy ensures that the insights generated are both empirically grounded and theoretically informed.

Hypotheses of the study

H1: Demographic factors significantly influence awareness of technopreneurship.
H2: Awareness significantly influences career choice.
H3: There is a significant difference in perception among demographic groups.

4 Summary Of Key Findings

H1: Demographic factors significantly influence awareness of technopreneurship

To examine the influence of demographic variables on awareness of technopreneurship, a multiple regression analysis was conducted using gender, educational qualification, and occupation as predictor variables. The model summary presented in Table 1 indicates an R value of 0.162 and an R Square value of 0.026, suggesting that only 2.6% of the variation in awareness toward technopreneurship is explained by the selected demographic variables. The adjusted R Square value was found to be negative (-0.004), indicating a weak explanatory power of the regression model. The standard error of estimate was 1.115, reflecting moderate variability in the prediction model.

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.162a	.026	-.004	1.115

4.1. Predictors

The regression coefficients shown in Table 2 reveal that all demographic variables, namely gender (β = -0.052, p = 0.607), educational qualification (β = -0.159, p = 0.144), and occupation (β = -0.098, p = 0.368), are negatively associated with awareness of technopreneurship. However, the significance values of all variables are greater than the threshold level of 0.05, indicating that none of the demographic variables significantly influence the awareness level of youth toward technopreneurship. Therefore, the hypothesis stating that demographic factors significantly influence awareness of technopreneurship is not supported.

Table 2. Coefficients

Model	Variables	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1	(Constant)	3.851	.731	—	5.266	.000
	Gender	-.144	.279	-.052	-.516	.607
	Educational Qualification	-.226	.153	-.159	-1.473	.144
	Occupation	-.092	.102	-.098	-.905	.368

4.2. Dependent Variable

The findings imply that awareness regarding technology-driven entrepreneurship is relatively uniform among youth irrespective of gender, educational qualification, or occupational status. This suggests that technological awareness and entrepreneurial interest are increasingly becoming common among different demographic groups due to wider digital exposure and accessibility to technological information.

H2: Awareness significantly influences career choice

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The relationship between awareness of technopreneurship and career choice was examined using Pearson correlation analysis. The results presented in Table 3 indicate a strong positive correlation between awareness level and career choice ($r = 1.000$, $p < 0.001$). The significance value confirms that the relationship is statistically significant.

Table 3. Correlations

	Level of Awareness	Career Choice
Level of Awareness		
Pearson Correlation	1	1.000**
Sig. (2-tailed)	—	.000
N	100	100
Career Choice		
Pearson Correlation	1.000**	1
Sig. (2-tailed)	.000	—
N	100	100

4.3. Correlation is significant at the 0.01 level (2-tailed).

The findings suggest that higher levels of awareness regarding technopreneurial opportunities strongly influence youth to consider entrepreneurship as a potential career option. Youth who possess greater knowledge about digital technologies, startup ecosystems, innovation opportunities, and technology-based business models are more likely to develop entrepreneurial intentions and career aspirations in the field of technopreneurship. This result highlights the importance of entrepreneurial education, technological exposure, and awareness programs in motivating young individuals toward technology-oriented entrepreneurial careers. Hence, the hypothesis stating that awareness significantly influences career choice is accepted.

H3: There is a significant difference in perception among demographic groups

To examine whether perceptions regarding technopreneurship differ across demographic groups, ANOVA analysis was performed based on gender, occupation, and educational qualification. The results are presented in Tables 4, 5, and 6.

The ANOVA results in Table 4 show that the relationship between career choice and gender is statistically insignificant ($F = 0.242$, $p = 0.624$).

Table 4. ANOVA Table – Career and Gender

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	.302	1	.302	.242	.624
Within Groups	122.287	98	1.248	—	—
Total	122.590	99	—	—	—

Similarly, Table 5 indicates that occupational differences do not significantly influence career choice toward technopreneurship ($F = 0.444$, $p = 0.777$).

Table 5. ANOVA Table – Career and Occupation

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	2.249	4	.562	.444	.777
Within Groups	120.341	95	1.267	—	—
Total	122.590	99	—	—	—

Furthermore, the results in Table 6 demonstrate that educational qualification also does not create significant differences in perception regarding technopreneurial career opportunities ($F = 0.838$, $p = 0.505$).

Table 6. ANOVA Table – Career and Educational Qualification

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Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups (Combined)	4.177	4	1.044	.838	.505
Within Groups	118.413	95	1.246	—	—
Total	122.590	99	—	—	—

Since all significance values are greater than 0.05, the study concludes that demographic characteristics do not create statistically significant differences in youth perceptions toward technopreneurship. Therefore, the hypothesis proposing significant differences in perception among demographic groups is rejected.

5 Conclusion

The present study examined youth perspectives on technopreneurship opportunities and analyzed the factors influencing their interest in pursuing technology-oriented entrepreneurial careers. The findings reveal that demographic variables such as gender, educational qualification, and occupation do not significantly influence awareness or perception toward technopreneurship, as evidenced by the regression and ANOVA results presented in Tables 1, 2, 4, 5, and 6. This indicates that technological entrepreneurship is perceived similarly across different demographic groups, suggesting equal entrepreneurial potential among youth irrespective of their background characteristics.

The study further identified a strong and statistically significant relationship between awareness and career choice, as shown in Table 3. Youth possessing greater awareness and understanding of technopreneurial opportunities demonstrate a stronger inclination toward selecting entrepreneurship as a career path. This finding emphasizes the importance of technological knowledge, innovation exposure, and entrepreneurial awareness in shaping career intentions among young individuals.

Overall, the study concludes that enhancing awareness and providing greater exposure to technology-driven entrepreneurial opportunities can significantly motivate youth participation in technopreneurship. Educational institutions, policymakers, and entrepreneurial support organizations should focus on strengthening entrepreneurial education, digital skill development, innovation training, and startup awareness programs to encourage youth engagement in technology-based entrepreneurship. Such initiatives can contribute to sustainable economic growth, innovation capacity, and employment generation in the digital era.

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Ethics Statement

This study did not involve human or animal subjects and, therefore, did not require ethical approval.

Statement Of Conflict Of Interests

The authors declare that they have no conflicts of interest related to this study.

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